

Work Order ID 67740

Tuesday, March 29, 2011 2:30:44 PM



Page 1

Item ID: D3196-4

Accept



Setup Start



Revision ID:

Stop



Item Name: Bar

Start Date: 3/29/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 4.00

Customer:

Reference:

Approvals:

Process Plan:

[Signature]

Date: 11-03-30

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3196	Rev C								

100

0.00



BAND SAW

Bandsaw

Memo

0.00

CRH 11/04/05

4

[Signature]

Jeaspa Bandsaw

Cut blank: (0.75" x 1.50") x 34.750" long Bar

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

M.A 11/04/06

4

[Signature]

HAAS CNC vertical machine #1

1-Machine D3196-4 as per Folio FA339 and Dwg D3196-4-2-Debur

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

M.A 11/04/06

4

[Signature]

Quality Control

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Page 2

Item ID: D3196-4

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Setup Start



Revision ID:

Stop



Item Name: Bar

Start Date: 3/29/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 4.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

130 QC8- Inspect parts - second check 0.00



QC

Memo

Quality Control

0.00

0.00

and 11/04/06

4 8

140 Chemical Conversion Coat per QSI005 4.1 0.00



HandFinish

Memo

Hand Finishing

0.00

0.00

4 BL 11-4-6.

150 Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3 0.00



Powdercoat

Powder Coating

Memo

0.00

0.00

W 11/5/08

START TIME:

3:30

OVEN TEMPERATURE:

320 FINISH TIME:

4:00

4 BL 11-4-6.

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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Work Order ID 67740

Tuesday, March 29, 2011 2:30:44 PM



Page 3

Item ID: D3196-4

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Setup Start



Revision ID:

Stop



Item Name: Bar

Start Date: 3/29/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 4/8/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

4 0 11/04/07

170

Identify as per dwg & Stock Location: 260

0.00



Packaging

Memo

0.00

Packaging

11/4/07

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/4/07

11-04-11

W/O:		WORK ORDER CHANGES						
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Tuesday, March 29, 2011 2:30:52 PM

Page 1

Work Order ID: 67740

Parent Item: D3196-4

Parent Item Name: Bar



Start Date: 3/29/2011

Required Date: 4/8/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev: A New Issue 05-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6B0.750X01.50 0		Purchased	No			100	f	61.6800	2.89	12.16842			



6061-T6 Bar .750 X 1.50



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT003	61.68	
116405	16.6	
116604	1.5	
→ 116623	43.58	

12.168 *mk 11/04/05*

W/O:		WORK ORDER CHANGES						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	67790
Description: Bar		Part Number:	D3196-4
Inspection Dwg: D3196 Rev: B		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
34.625	+/-0.010	34.625	✓		TAPE	GA-12
33.650	+/-0.010	33.650	✓		"	"
16.639	+/-0.010	16.639	✓		"	"
0.488	+/-0.010	0.490	✓		Vern	GA-01
0.962	+/-0.005	0.961	✓		"	"
0.464	+/-0.010	0.464	✓		"	"
0.504	+/-0.010	0.502	✓		"	"
Ø0.344	+0.006/-0.001	Ø0.344	✓		"	"
Ø0.660 x 100°	+0.008/-0.001 x 0.5°	0.660x100°	✓		"	"
0.512	+/-0.005	0.510	✓		"	"
0.060 x 45°	+/-0.010 x 0.5°	0.063x45°	✓		"	"
4.750	+/-0.010	4.750	✓		"	"
12.531	+/-0.010	12.531	✓		TAPE	GA-12
16.627	+/-0.010	16.627	✓		"	"
21.844	+/-0.010	21.844	✓		"	"
29.625	+/-0.010	29.625	✓		"	"
0.250	+/-0.010	0.251	✓		Vern	GA-01
1.000	+/-0.010	1.000	✓		"	"
R0.125	+/-0.010	R0.125	✓		R-G	ref.
0.987	+/-0.010	0.990	✓		Vern	GA-01

Measured by:	B.A	Audited by:	ML	Prototype Approval:	N/A
Date:	11/04/06	Date:	11/04/06	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue	KJ/RF	
B	06.10.24	Dwg Rev. updated	KJ/JLM	BE

W/O:		WORK ORDER CHANGES						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

RELEASED

06.10.31

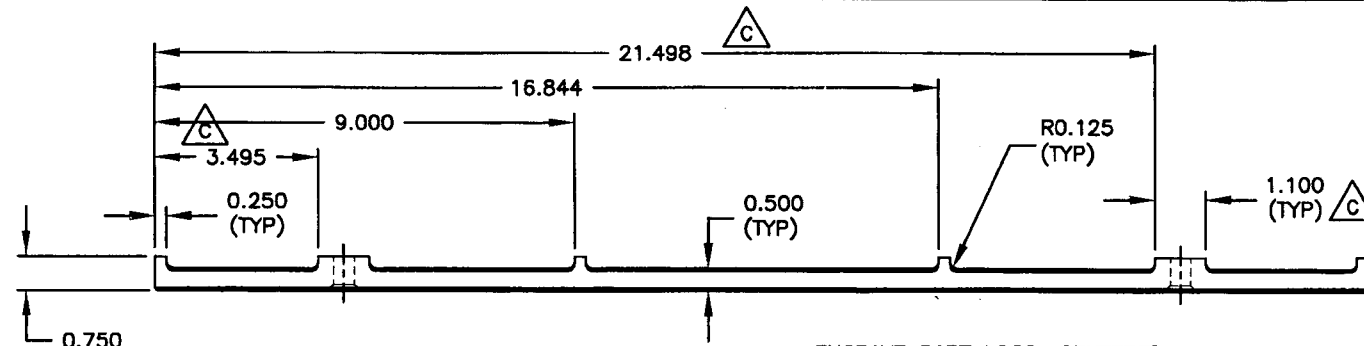
DEO ATTACHED

STAGE COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. U7740
PL 1103-30

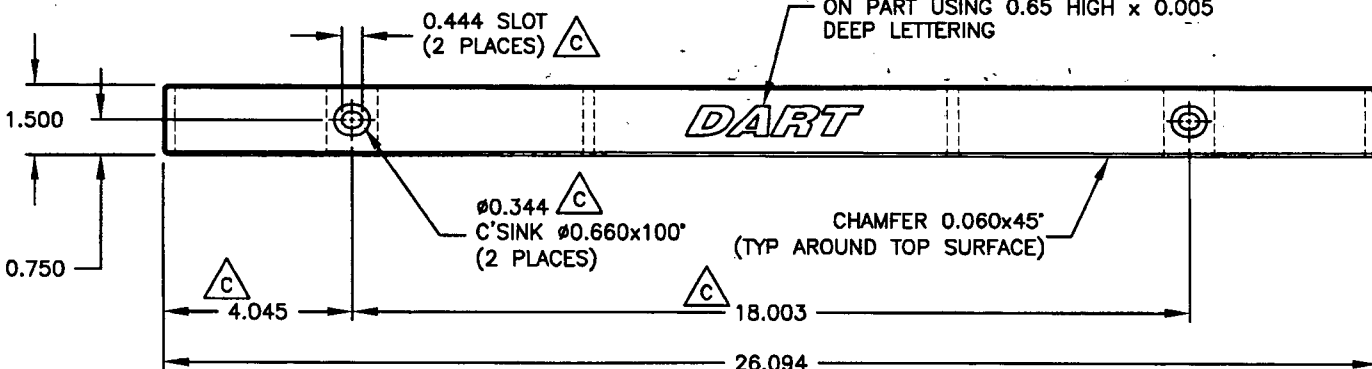
CHAMFER 0.060x45°
(TYP 6 PLACES)

ENGRAVE P/N CENTERED
ON PART USING
0.15 HIGH x 0.005 DEEP
LETTERING

R0.125
(TYP)



ENGRAVE DART LOGO, CENTERED
ON PART USING 0.65 HIGH x 0.005
DEEP LETTERING



D3196-1 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DESIGN	DRAWN BY	DART AEROSPACE LTD	REV. C
00	JB	HAMKESBURY, ONTARIO, CANADA	
CHECKED AH	APPROVED JB	DRAWING NO. D3196	SHEET 1 OF 3
DATE 06.10.31		TITLE BAR	SCALE 1:4
A	03.06.25	NEW ISSUE	
B	06.09.25	ADD D3196-5	
C	06.10.31	ADD SLOTS ON -1; REMOVED -5	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

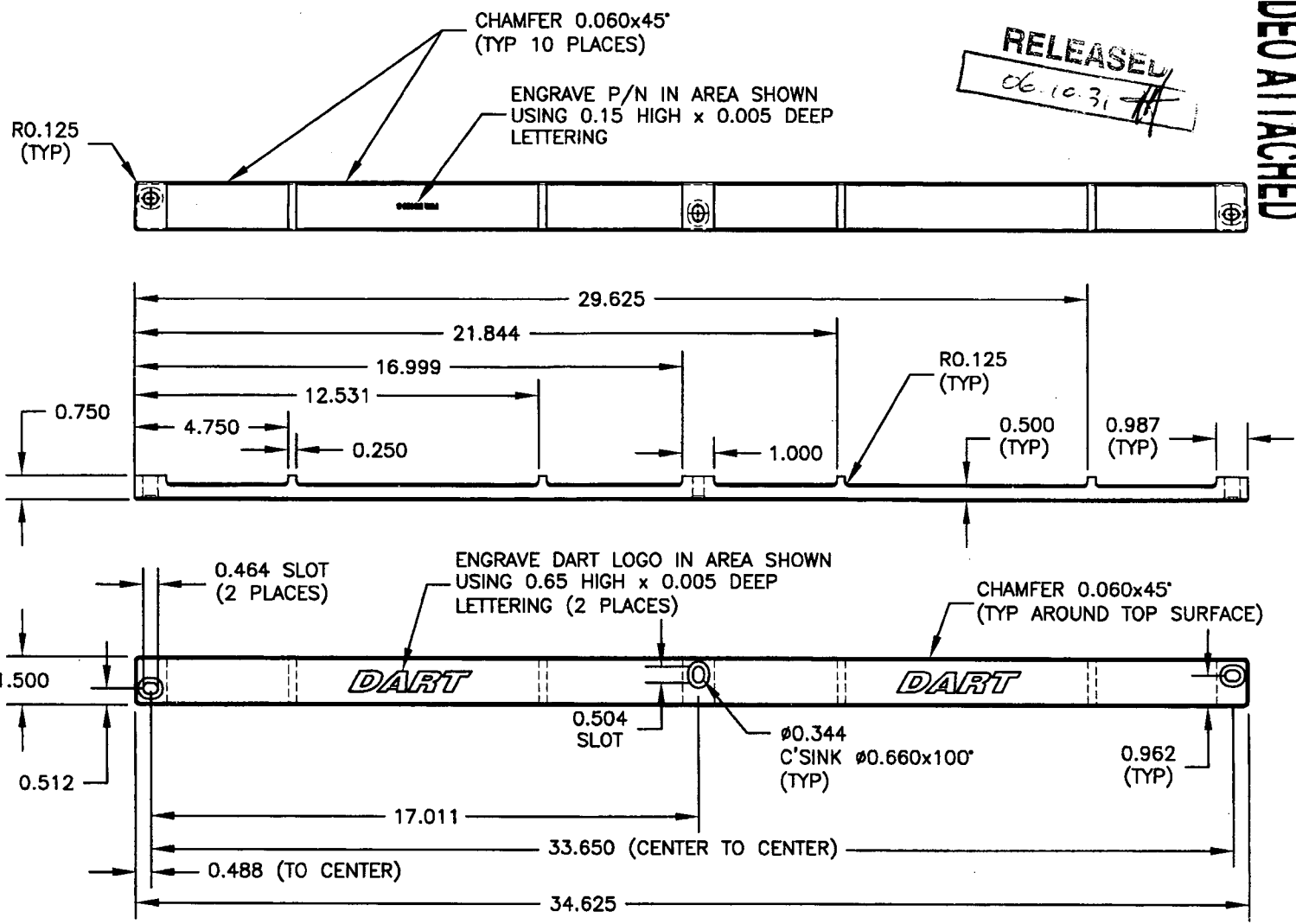
NOTE: Date & initial all entries

W6 67740

DART

DEO ATTACHED

RELEASED
06.10.31



D3196-3 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DESIGN	99	DRAWN BY	AS	DART AEROSPACE LTD
CHECKED	AM	APPROVED	AM	HAMKESBURY, ONTARIO, CANADA
DATE	06.10.31	TITLE	BAR	REV. C
		DRAWING NO.	D3196	SHEET 2 OF 3
		SCALE	1:5	

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

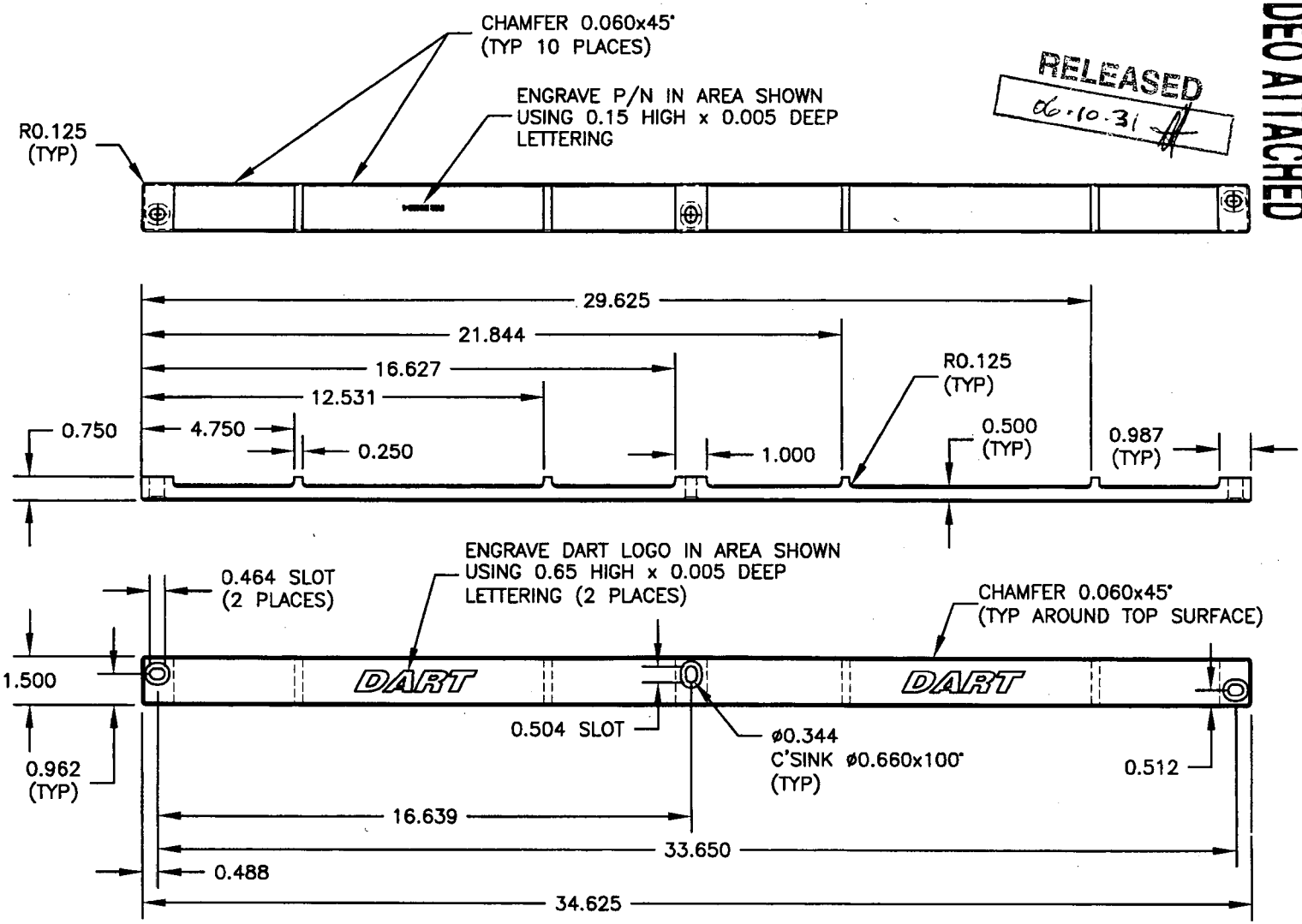
NOTE: Date & initial all entries

W6 47740

DART

DEO ATTACHED

RELEASED
06-10-31



D3196-4 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
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DESIGN	Q	DRAWN BY		DART AEROSPACE LTD
CHECKED	PH	APPROVED		HAWKESBURY, ONTARIO, CANADA
DATE	06.10.31	TITLE	BAR	REV. C
		DRAWING NO.	D3196	SHEET 3 OF 3
		SCALE	1:5	

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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3196-C-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>J</i>	MFG. APPR. <i>91</i>	APPROVED <i>140</i>		DE APPR. <i>#</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29		DATE 08.08.29	DATE 08.09.04	

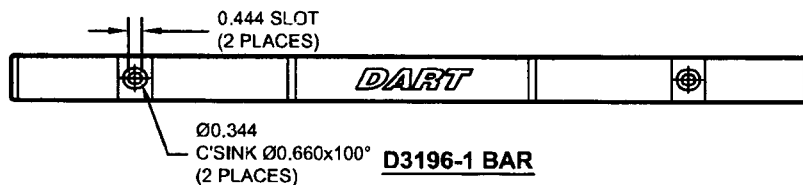
SHEET 1 MODIFY SLOT DIMENSIONING ON D3196-1 AS SHOWN:

IS:



D3196-1 BAR

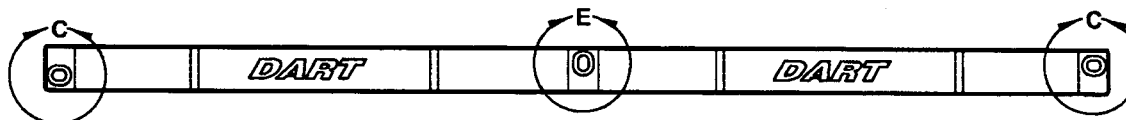
WAS:



D3196-1 BAR

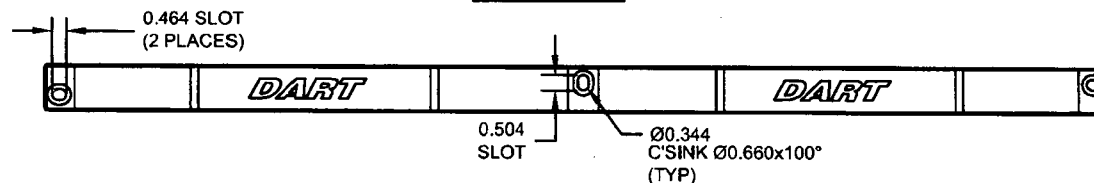
SHEET 2 MODIFY SLOT DIMENSIONING ON D3196-3 AS SHOWN:

IS:



D3196-3 BAR

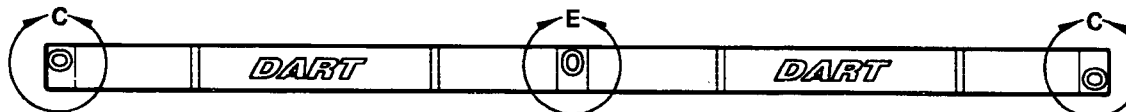
WAS:



D3196-3 BAR

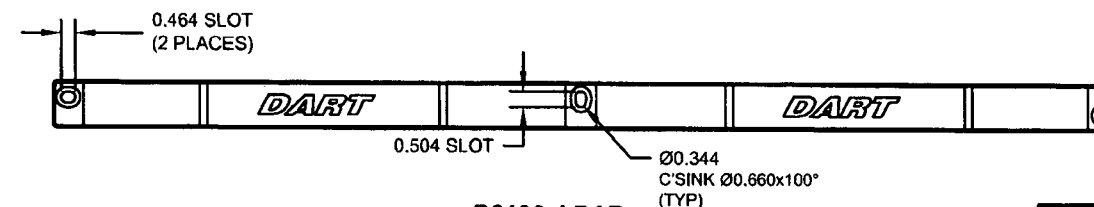
SHEET 3 MODIFY SLOT DIMENSIONING ON D3196-4 AS SHOWN:

IS:



D3196-4 BAR

WAS:



D3196-4 BAR

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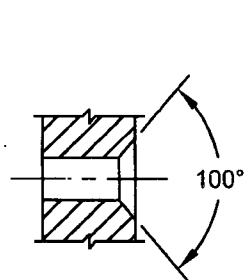
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

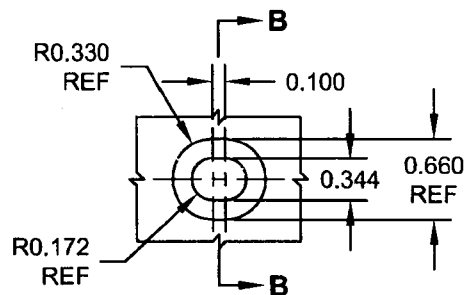
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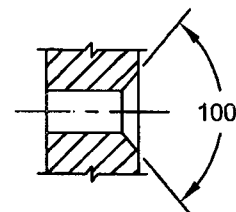
DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D3196-C-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>			
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04		



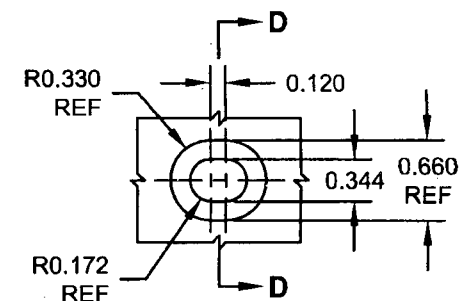
SECTION B-B



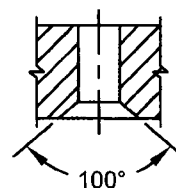
DETAIL A



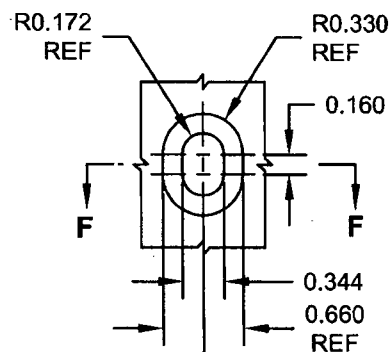
SECTION D-D



DETAIL C



SECTION F-F



DETAIL E

also 07740

NOTE: THIS CHANGE HAS BEEN DONE TO CLARIFY SLOT DIMENSIONS ONLY. NO CHANGES HAVE BEEN MADE TO THE PARTS
SEE NCR 08-051 FOR FURTHER INFORMATION
ALL OTHER INFORMATION REMAINS UNCHANGED

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